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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,687	10/27/2003	Kevin J. Powell	1689.0320001	8675

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EXAMINER
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KIM, AHSHIK

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/693,687	POWELL ET AL.	
	Examiner	Art Unit	
	Ahshik Kim	2876	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 9/29/05 (Amendment).
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/26/05</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Amendment*

1. Receipt is acknowledged of the amendment filed on September 29, 2005. In the  
5 amendment claims 1, 9, 19-21, 25, 29, 33, and 34 were amended. Currently, claims 1-35 remain  
in the examination.

### *Drawings*

2. The formal drawings were received on September 29, 2005. These drawings are  
10 approved and entered.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the  
basis for the rejections under this section made in this Office action:

15 A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11, 13, 14, 17, and 19-35 are rejected under 35 U.S.C. 102(b) as being  
20 anticipated by Hush et al. (US 6,226,300, hereinafter “Hush”).

Re claims 1, 5, 19, 21-26, and 29-35, Hush discloses a method for a plurality of radio frequency (RFID) tag to communicate with a RFID reader/interrogator (see abstract) wherein each tag contains the identification number. The interrogation method comprises utilizing a binary tree search method, the tree having multiple levels. As shown in figure 4, the devices and

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interrogator work in bit-by-bit manner in selecting designated RFID tag (col. 6, lines 7+; col. 6, lines 21+). For example, when the first bit is 1, then only the tags with the first bit of 1 respond. This process is iterated to the next bit until the last bit, and the tag is identified.

Re claims 2, 4, 14, and 17, the tag, on each bit value from the interrogator, must read the  
5 corresponding bit value and either responds (when it matches) or not respond.

Re claims 3, 10, 11, 27, and 28, one arbitration scheme utilizes a random number (col. 2, lines 26-39).

Re claims 5 and 6, as shown in figure 5, the binary tree is a multiple-level tree, and traversal has to be performed in iterative manner from the intermediate nodes (see figure 4).

10 Re claims 7 and 8, responding to the interrogator upon receiving the first bit is receiving command from the reader and executing the command (col. 2, lines 65+).

Re claim 9, the RFID tag contains an antenna 28 (col. 4, lines 12+) and backscatter circuitry (col. 5, lines 5+).

Re claim 13, each bit pattern is treated independently (meaning that first bit is compared,  
15 and then next, and so on).

Re claim 20, the RFID tag further comprises a modulator (col. 13, lines 1-4).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all  
20 obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the  
25 manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any  
5 evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hush et al. (US  
10 6,226,300) in view of Friedman et al. (US 6,412,086, hereinafter "Friedman").

The teachings of Hush have been discussed above. Hush, however, is silent on the random bit generator further comprises an oscillator.

Friedman teaches a radio frequency identification transponder (see abstract) operating in conjunction with RFID base station (col. 1, lines 21+). The RFID tag contains, among other  
15 things, a random roll oscillator (col. 5, lines 38+).

In view of Friedman's teaching, it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate well-known oscillator to the teachings of Hush in order to successfully generate random number. It is known that some random number generator uses an oscillator in conjunction with clock and register shifting as a method of  
20 generating seed value. Accordingly, incorporating an oscillator is within the ordinary skill in the art.

8. Claims 15, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hush et al. (US 6,226,300) in view of Chainer et al. (US 6,397,334, hereinafter "Chainer").

The teachings of Hush have been discussed above. Hush, however, fails to specifically teach or fairly suggest that the tag bits contains a timestamp bits or hashed bits.

5 Chainer teaches a system and the methods for authenticating objects (see abstract) utilizing RFID tags (see col. 2, lines 35+; col. 2, lines 47+). The tag information contains a timestamp or a hash of the data (col. 4, lines 40+).

In view of Chainer's teaching, it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate well-known timestamp or hashed information  
10 into the bit pattern in order to improve the security of the tag. It is the Examiner's view that what goes into the tag can certainly be considered a design variation. Obviously, in certain application (i.e., facility entry embodiment), saving timestamp would be meaningful. In case of EAS (electronic article surveillance) in a department store, a timestamp value may not be crucially important. Accordingly, the content of the tag is largely determined by characteristics  
15 of the application. In view of the above, location is user selectable content for a given application. Hashing information improves protection of the data, resulting in improved security of the tag. Such modification would have been an obvious expedient, well within the ordinary skill in the art.

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### ***Response to Arguments***

9. The Applicant's amended claims and remarks filed on September 29, 2005 have been carefully reviewed and considered, but they are not persuasive.

With respect to the merits of the claims, Examiner respectfully disagrees with Applicant's characterization of the previous Office Action.

Hush discloses a method of establishing wireless communications between an interrogator and a plurality of identification devices (see abstract). As shown in the figures, the identification number would be more than a bit (since there are multiple items). The interrogator generally transmits an interrogation signal or command via the antenna (col. 4, lines 20+). The signal can be considered a first at least one bit from the reader. In another embodiment, the interrogator can specify that a response is required from a particular device (col. 5, lines 23+). In such case, request for response will accompany the identification number for the device (a second bit pattern). The binary traversal being performed between the reader and the plurality of tags are shown in figure 4. Obviously, by traversing, verification of a particular bit branches out toward a group of devices which would include the target device. It is the Examiner's position that the Hush patent discloses at least the method recited in claim 1.

The remarks describing these elements have been fully considered, but they are not persuasive, and therefore, the Examiner has made this Office Action final.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing  
5 date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Ahshik Kim* whose telephone number is (571)272-2393. The examiner can normally be reached between the hours of 6:00AM to 3:00PM Monday thru Friday.

10 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571)272-2398. The fax number directly to the Examiner is (571)273-2393. The fax phone number for this Group is (703)872-9306.

15 Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [ahshik.kim@uspto.gov].

20 *All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

25 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available for Private PAIR only. For more information about the PAIR system,  
30 see <http://pair-direct.uspto.gov>. Should you have any questions or access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

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Ahshik Kim



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Primary Examiner

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December 12, 2005